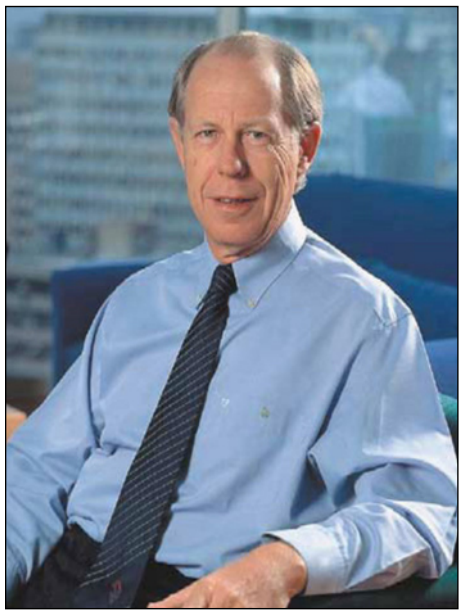
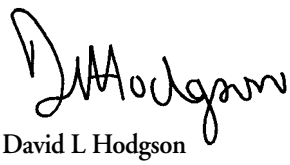
Guest Editorial



The greatest threat that gold producers face in the new millennium is simply being able to survive in the present climate of a relatively static and depressed gold price and having to meet the ever increasing environmental requirements. Margins are being continually squeezed as avenues to reduce operating costs and increase productivity become more and more challenging. AngloGold has taken the view that it is time for gold companies to have some influence over the supply-demand fundamentals for their product and, as such, have made gold market development a strategic objective. The aim is to fund projects that have a positive impact on gold off-take and to improve sentiment in the gold market.

The gold market development strategy is being actively pursued, not only through well known gold jewellery initiatives, but also in the relatively less publicised industrial uses for gold arena. Congruent with this strategy, in October 1999 AngloGold and Mintek, South Africa's world renowned metallurgical research organisation, announced a joint undertaking to explore the potential for gold in industrial applications. The programme has subsequently been given the name Project Autek and the research to-date has been focused exclusively on gold-based catalyst systems. This is an area where suitably prepared gold catalysts have already demonstrated some unique and remarkable properties under comparatively mild conditions. For example, in air purification applications, gold catalysts can remove carbon monoxide from gas streams at room temperature, even in the presence of humidity. This is just one of a number of chemical reactions where gold catalysts have been shown to possess exciting potential and advantage over other catalyst systems. However, gold catalysts have yet to be exploited commercially and Project Autek is still in its early stages. The initial Project Autek research effort has been targeted towards air purification, but this will be expanded during 2001 into the field of NOx reduction in diesel and lean-burn vehicle exhaust emissions. This is an area that is facing increasing environmental pressures as more stringent European vehicle emission regulations come into force in 2005.

Project Autek literature surveys have revealed that significant research has been done on gold catalysts in various countries around the world. As a result, in April 2001, AngloGold, together with the World Gold Council, Mintek and the Catalysis Society of South Africa, will be holding an international conference in Cape Town, South Africa. The conference is called 'New Industrial Uses for Gold – 2001 – Catalytic Gold' and, as the name suggests, this conference will be exclusively devoted to expounding the properties and potential industrial applications of gold as a catalyst. It is our intention to provide a forum that will encourage the leading researchers in this field to interact not only with each other, but with potential industrial end-users as well. A desirable outcome of these interactions would be that the potential industrial end-users would see the economic possibilities of gold catalysts and would be able to set specific target reaction requirements for gold catalysts. Such economically beneficial reaction targets would, hopefully, direct and inspire researchers to achieve specific outcomes.



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David Hodgson is an Executive Officer of AngloGold, the largest gold mining company in the world. He has 30 years experience in the mining industry and is currently responsible for Anglogold's South African operations. Prior to this position he was responsible for all AngloGold's Research and Development activities, and has been involved in establishing Project Autek.